EXHIBIT 5
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Graywater Central

Summary: All about all aspects of graywater systems. Why to use them, how to choose, build and use them, regulations, studies, and examples. Includes graywater irrigation, graywater treatment, graywater filters, and indoor graywater reuse.

Graywater information

- **Common mistakes & preferred practices**
- Graywater Q&A
- Graywater links
- Graywater system design consulting
- Understanding Wild Water (article)
- Indoor graywater reuse
- Builder's action summary
- Gray water workshop
- Sistimas para aguas grises (en Español)

Graywater books

- **Create an Oasis with Graywater (book)**
- **Branched Drain Graywater Systems (book)**
- **Builder's Graywater Guide (book)**

System examples

- System selection chart (PDF)
- Branched drain system explanation
- Branched drain system example (PDF)
- Branched drain in indigenous community

What is graywater ?

Any water that has been used in the home, except water from toilets, is called graywater . Dish, shower, sink, and laundry water comprise 50-80% of residential "waste" water. This may be reused for other purposes, especially landscape irrigation.

Why use graywater ?

It's a waste to irrigate with great quantities of drinking water when plants thrive on used water containing small bits of compost. Unlike a lot of ecological stopgap measures, graywater reuse is a part of the fundamental solution to many ecological problems and will probably remain essentially unchanged in the distant future. The benefits of graywater recycling include:

- Lower fresh water use
- Less strain on failing septic tank or treatment plant
- Graywater treatment in topsoil is highly effective
- Ability to build in areas unsuitable for conventional treatment
- Less energy and chemical use
- Groundwater recharge
- Plant growth
- Reclamation of otherwise wasted nutrients

- Manual graywater systems of Huehuetortuga
- Gravity drum

Graywater regulation

- **Graywater policy center**
- How to improve California and Uniform Plumbing Code (UPC) graywater laws
- How to improve International plumbing code (IPC) graywater law
- Reward for permitted system plans
- How to inspect or construct legal stub outs for a future graywater system
- Fecal coliform measurements
- California study (pdf)

The benefits of graywater recycling (in detail)

*** Lower fresh water use**

Graywater can replace fresh water in many instances, saving money and increasing the effective water supply in regions where irrigation is needed. Residential water use is almost evenly split between indoor and outdoor. All except toilet water could be recycled outdoors, achieving the same result with significantly less water diverted from nature.

*** Less strain on septic tank or treatment plant**

Graywater use greatly extends the useful life and capacity of septic systems. For municipal treatment systems, decreased wastewater flow means higher treatment effectiveness and lower costs.

*** Highly effective purification**

Graywater is purified to a spectacularly high degree in the upper, most biologically active region of the soil. This protects the quality of natural surface and ground waters.

*** Site unsuitable for a septic tank**

For sites with slow soil percolation or other problems, a graywater system can be a

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For sites with slow soil percolation or other problems, a graywater system can be a

partial or complete substitute for a very costly, over-engineered system.

*** Less energy and chemical use**

Less energy and chemicals are used due to the reduced amount of both freshwater and wastewater that needs pumping and treatment. For those providing their own water or electricity, the advantage of a reduced burden on the infrastructure is felt directly. Also, treating your wastewater in the soil under your own fruit trees definitely encourages you to dump fewer toxic chemicals down the drain.

*** Groundwater recharge**

Graywater application in excess of plant needs recharges groundwater.

*** Plant growth**

Graywater enables a landscape to flourish where water may not otherwise be available to support much plant growth.

*** Reclamation of otherwise wasted nutrients**

Loss of nutrients through wastewater disposal in rivers or oceans is a subtle, but highly significant form of erosion. Reclaiming nutrients in graywater helps to maintain the fertility of the land.

*** Increased awareness of and sensitivity to natural cycles**

Graywater use yields the satisfaction of taking responsibility for the wise husbandry of an important resource.

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